IN THE CLAIMS

1-27. (Canceled)

28. (Previously Presented) A bone fixation implant comprising:

a longitudinal shaft having a first end, a second end, and a central longitudinal axis;

an anchoring element at the first end of the shaft, the anchoring element configured and dimensioned for engaging bone; and

a rotational coupling element provided at an interface between the anchoring element and the shaft, the coupling element configured and dimensioned to permit free rotation of the anchoring element relative to the shaft about the central longitudinal axis when in a first position and rotationally lock the anchoring element to the shaft when in a second position.

29. (Currently Amended) The implant of claim 28, further comprising an axial connection element disposed at an interface between the anchoring element and the shaft, the axial connection element preventing a relative securing of the anchoring element to the shaft along the central longitudinal axis.

30. (Previously Prcsented) The implant of claim 29, wherein the axial connection element and the rotational coupling element are separate structures.

31. (Previously Presented) The bone fixation implant of claim 28, wherein the anchoring element is detachably connected to the shaft.

32. (Previously Presented) The bone fixation implant of claim 29, wherein the axial connection element includes a plurality of spaced-apart, elastic tabs.

33. (Previously Presented) The bone fixation implant of claim 32, wherein the elastic tabs include projections that engage a complementary, circular groove concentric with the longitudinal axis.

34. (Previously Presented) The bone fixation implant of claim 33, wherein the elastic tabs are disposed on the anchoring element and the groove is disposed at the shaft.

35. (Previously Presented) The bone fixation implant of claim 33, wherein the projections have a convex shape.

36. (Previously Presented) The bone fixation implant of claim 33, wherein the groove has a V-shaped cross section.

37. (Previously Presented) The bone fixation implant of claim 29, wherein the axial connection element includes a pin fixed transversely to the longitudinal axis, and the pin engages a complementary circular groove concentric with the longitudinal axis.

38. (Previously Presented) The bone fixation implant of claim 29, wherein the axial connection element includes a retaining ring that engages a first annular groove at the shaft and a second annular groove at the anchoring element, the first and second annular grooves concentric with the longitudinal axis.

39. (Currently Amended) The bone fixation implant of claim 28 [[1]], wherein the rotational coupling element rotationally locks the shaft and the anchoring element through a frictional connection.

40. (Previously Presented) The bone fixation implant of claim 28, wherein the rotational coupling element includes

a hollow, conical volume disposed coaxially with the longitudinal axis at an interface between the shaft and the anchoring element, and

a conical wedge configured and dimensioned for axial movement within the conical volume,

wherein movement of the conical wedge in a first direction within the conical volume frictionally locks the shaft relative to the anchoring element.

41. (Previously Presented) The bone fixation element of claim 40, wherein the hollow, conical volume includes a first conical volume provided in the shaft and a second corresponding conical volume provided in the anchoring element.

42. (Previously Presented) The bone fixation implant of claim 28, wherein the rotational coupling means includes:

a plurality of radially elastic blades disposed at the anchoring element configured and dimensioned for insertion within a central borehole at the first end of the shaft; and

a conical locking screw configured and dimensioned to press the elastic blades against an inner wall of the central borehole to rotationally lock the shaft to the anchoring element.

43. (Previously Presented) The bone fixation element of claim 42, wherein the radially elastic blades include projections configured and dimensioned to engage a complementary circular groove at the shaft concentric with the longitudinal axis.

44. (Previously Presentcd) The bone fixation implant of claim 28, wherein the rotational coupling element rotationally locks the shaft and the anchoring element through a positive connection.

45. (Previously Presented) The bone fixation implant of claim 44, wherein the rotational coupling element includes a first denticulation at the anchoring element configured and dimensioned to engage a second denticulation at the shaft.

46. (Previously Presented) The bone fixation implant of claim 45, wherein the second denticulation is axially-displaceable for engagement with the first denticulation.

47. (Previously Presented) The bone fixation implant of claim 46, wherein the second denticulation is axially displaced by means of a screw.

48. (Currently Amended) The bone fixation implant of claim 28, wherein the anchoring element includes a plurality of helical blades having a pitch [[of G]].

49. (Currently Amended) The bone fixation implant of claim 48, wherein the pitch [[G]] is greater than 50 mm.

50. (Previously Presented) The bone fixation implant of claim 28, wherein the shaft has a non-circular cross-section.

51. (Previously Presented) A bone fixation system comprising:

a bone plate configured and dimensioned for attachment to a femur, the bone plate including an angular sleeve with a non-circular cross-section adapted to receive a bone fixation implant;

a bone fixation implant configured and dimensioned for use with the bone plate, the bone fixation implant including

a shaft having a first end, a second end, and a central longitudinal axis;

an anchoring element at the first end of the shaft, the anchoring element having a plurality of helically-twisted blades for engaging bone;

an axial connection element disposed at an interface between the anchoring element and the shaft, the axial connection element preventing axial movement of the anchoring element relative to the shaft along the central longitudinal axis; and

a rotational coupling element disposed at an interface between the anchoring element and the shaft, the coupling element configured and dimensioned to permit free rotation of the anchoring element with respect to the shaft about the central longitudinal axis when in a first position and rotationally lock the anchoring element to the shaft when in a second position.

52. (Previously Presented) A method for repairing a bone fracture comprising:

inserting a bone fixation implant into a fractured bone, the bone fixation implant including:

a shaft having a first end, a second end, and a central longitudinal axis;

an anchoring element at the first end of the shaft, the anchoring element configured and dimensioned for engaging the bone;

a rotational coupling element configured to permit free rotation of the anchoring element with respect to the shaft about the central longitudinal axis when in a first position and rotationally lock the anchoring element to the shaft when in a second position;

inserting a bone plate having a sleeve keyed to mate with the shaft of the bone fixation implant over the shaft of the bone fixation implant;

aligning the bone plate with the fractured bone; and

moving the rotational coupling element into the second position to rotationally lock the anchoring element to the shaft.